CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No: CTCE/BBMP/MEW/W.No.14/BM/Agg.G/2017-18 19.06.2017

TEST REPORT ON GRADATION OF AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**M/s. Mahendra Engineering Works, (Prop. G. Venkatesh),** No. 243, 15th D Cross, 2nd stage, 2nd phase, West of Chord Road, Mahalakshmipuram, Bangalore – 560 086.
* Name of work	:	Improvements and asphalting to 9th and 10th Main Bhuvaneshwari Nagara (left side and right side) 1st Main Brundavana Layout and Cross Roads in Bagalagunte Ward No. 14, Dasarahalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/95/2017-18 Dated: 06.06.2017
* Sample ID	:	Hot Mix Plant, Bangalore
Technical Reference	:	IS : 2386(Part -1)-1963 (RA-2011)
* Type of Mix	:	Bituminous Macadam
Date of Testing	:	19.06.2017

Total Weight of Sample: **5100** gm

Sieve Size, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH Table 500-4 specification
19	360	7.06	7.06	92.94	90-100	
13.2	1540	30.20	37.25	62.75	56-88	
4.75	1590	31.18	68.43	31.57	16-36	
2.36	960	18.82	87.25	12.75	4-19	
0.3	425	8.33	95.59	4.41	2-10	
0.075	115	2.25	97.84	2.16	0-8	

Total Weight of Sample: **5200** gm

Sieve Size, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH Table 500-4 specification
19	305	5.87	5.87	94.13	90-100	
13.2	1530	29.42	35.29	64.71	56-88	
4.75	1860	35.77	71.06	28.94	16-36	
2.36	900	17.31	88.37	11.63	4-19	
0.3	250	4.81	93.17	6.83	2-10	
0.075	115	2.21	95.38	4.62	0-8	

* Information is furnished by the Customer/Representative

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ಬಿ.ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬೆಂಗಳೂರು ಪೂರ್ವ ವಿಭಾಗ
ಬೆಂಗಳೂರು

Civil-Tech Consultants & Engineers Bangalore

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.

Tele Fax : 23223227, Website : www.civiltechconsultants.com

E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Civil-tech Consultants & Engineers
#23/14, 7th Cross, 3rd Stage, 4th Block,
Shakthi Ganapathinagar,
Basaveshwaranagar, Bangalore-560 079.

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T-2377

Job No.: CTCE/BBMP/MEW/W.No.14/CSR-06/363f/QB(BC)/2017-18 17.06.2017

TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**M/s. Mahendra Engineering Works,** (Prop. G. Venkatesh), No. 243, 15th D Cross, 2nd stage, 2nd phase, West of Chord Road, Mahalakshmipuram, Bangalore – 560 086.
* Name of work	:	Improvements and asphalting to 9th and 10th Main Bhuvaneshwari Nagara (left side and right side) 1st Main Brundavana Layout and Cross Roads in Bagalagunte Ward No. 14, Dasarahalli Sub Division, BBMP, Bangalore.
* PMC Reference	:	BBMP/DZ/AEE/TDSD/PR/95/2017-18 Dated: 06.06.2017
* Sample ID	:	Bitumen
Source/ Location	:	Hot Mix Plant, Bangalore.
Sample Received on	:	15.06.2017
Period of Testing	:	15.06.2017 to 17.06.2017

The results of the tests conducted on the bitumen sample are as follows:

Sl. No	Description	Test Method as per IS	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	IS :1203 -1978 (RA-2014)	68	60 to 70
2	Softening point, ^{0}C	IS :1205 -1978 (RA-2014)	47	Min. 45
3	Ductility at 27^{0}C, cm	IS :1208 -1978 (RA-2014)	100 >	Min. 50
4	Flash Point, ^{0}C	IS :1209 -1978 (RA-2014)	308	Min. 220

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ಟಿ.ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

VIDYARANI P.K.
Technical Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/MEW/W.No.14/BC/AIV/2017-18 17.06.2017

TEST REPORT ON IMPACT VALUE OF AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**M/s. Mahendra Engineering Works,** (Prop. G. Venkatesh), No. 243, 15th D Cross, 2nd stage, 2nd phase, West of Chord Road, Mahalakshmipuram, Bangalore – 560 086.
* Name of Work	:	Improvements and asphalting to 9th and 10th Main Bhuvaneshwari Nagara (left side and right side) 1st Main Brundavana Layout and Cross Roads in Bagalagunte Ward No. 14, Dasarahalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/95/2017-18 Dated: 06.06.2017
* Sample ID	:	Hot mix plant, Bangalore.
* Type of Mix	:	Bituminous Concrete
Technical Reference	:	IS: 2386 (Part- 4)-1963 (RA-2011)
Date of Testing	:	17.06.2017

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	379	383	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	78	79	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	304	
4	Aggregate Impact value = percent fines 100* (W2/W1) percent	20.58	20.63	**20.60**

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%

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Basaveshwaranagar, Bangalore-560 079.